Remarks

This Application has been carefully reviewed in light of the Final Office Action mailed August 23, 2006. Applicants believe all pending claim are allowable over the Examiner's rejections without amendment and respectfully provide the following remarks. Applicants respectfully request reconsideration and allowance of all pending claims.

I.   The Claims Recite Patentable Subject Matter

The Examiner rejects Claims 1-19, 22-23, and 26-43 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Applicants respectfully disagree.

Applicants reiterate that producing a useful, concrete, and tangible result is the key to patentability according to *State Street* and other applicable case law, and incorporate by reference the case law discussed in the Response mailed June 9, 2006 (the "Previous Response").

Applicants' claims are not merely manipulations of abstract ideas. Instead, each of Applicants' claims clearly recites a useful, concrete, and tangible result, which is all the law requires for a claim to be directed to statutory subject matter, and is therefore directed to patentable subject matter.[1] The Examiner's response to this statement from the Previous Response is puzzling. (*See* Office Action, Page 37) The Examiner indicates that this statement is a conclusion without evidence or legal analysis. (*See* Office Action, Page 37) However, Applicants followed this statement in the Previous Response with approximately three pages of analysis as to why Applicants' claims recite a useful, concrete, and tangible result. While the Examiner may disagree with the conclusion reached based on the analysis, the Examiner's apparent characterization of Applicants' arguments as "conclusory" based solely on this statement from Applicants' Response is, respectfully,

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[1] Applicants note that to the extent the Examiner bases any part of this rejection on a "technological arts" requirement, the Board of Patent Appeals and Interferences, in a precedential opinion, recently determined that no "technological arts" requirement exists under 35 U.S.C. § 101. *See Ex Parte Lundgren*, 2004 WL 3561262, *5, Appeal No. 2003-3088 (Bd. Pat. App. & Int. 2004) (also available at http://www.uspto.gov/web/offices/dcom/bpai/prec/2003-2088.pdf) (reversing an examiner's rejection under 35 U.S.C. § 101 and stating that "[o]ur determination is that there is currently no judicially recognized separate 'technological arts' test to determine patent eligible subject matter under § 101" and "we decline to create one").[1] Thus, Applicants respectfully submit that a rejection based on a "technological arts" requirement is or would be improper.

untenable. Applicants maintain that the claims recite a useful, concrete, and tangible result for at least the following reasons.

For example, independent Claim 1 recites a "data mining system comprising" the following:

- a client machine; and
- a service broker operable to:

> receive a consultation request from the client machine through a computer network, the consultation request associated with data for consulting a Neugent, the Neugent being distinct from the client machine;
>
> forward the consultation request to the Neugent to invoke a consultation of the Neugent, the Neugent operable to perform a predictive analysis with respect to the data for consulting the Neugent that is associated with the consultation request; and
>
> forward to the client machine through the computer network a result object returned by the Neugent, the result object comprising a prediction determined by the Neugent with respect to the data for consulting the Neugent.

Thus, "forward[ing] to the client through the computer network a result object returned by the Neugent, the result object comprising a prediction determined by the Neugent with respect to the data for consulting the Neugent" is one practical application of independent Claim 1, the useful, concrete, and tangible result being the result object returned by the Neugent that is forwarded to the client through the computer network and that comprises a prediction determined by the Neugent with respect to the data for consulting the Neugent.

In response to this argument from Applicants' Previous Response, the Examiner states that the result object is not claimed to represent anything in the real world and that it is not required to cause anything to occur in the real world. (*See* Office Action, Page 38) Applicants respectfully disagree with the Examiner's statement that the "result object" recited in Applicants' claims is not claimed to represent anything in the real world. The claimed "result object" is returned by the Neugent and comprises a prediction determined by the Neugent with respect to the data for consulting the Neugent. The result object is itself a thing in the real world, as are the Neugent, the prediction determined by the Neugent, and the data for consulting the Neugent.

The Examiner also states that Applicant believes that "the forwarding of the object in a network is sufficient, but single computers can have networks within them (e.g., a 'Beowulf Cluster')." (*See* Office Action, Page 38) Even assuming that the Examiner's characterization of a Beowulf Cluster is correct, without further explanation from the Examiner, Applicants do not see the relevance to rejections under 35 U.S.C. § 101 of whether the computer network recited in Claim 1 is a single computer, a geographically disperse computer network, or any other suitable type of computer network.

Additionally, Applicants reiterate that the Specification provides, for example, a discussion of certain deficiencies of some systems:

> Data mining is the analysis of large quantities of data in order to extract useful information from the data, such as for making predictions over new data (also called predictive analysis). A number of data mining products are available. However, current commercial products which allow data mining of the wealth of information on the Web require the client application to maintain a predictive model, although a service broker may collect or store raw data and forward it to the client upon demand. Since the client must maintain the predictive model, the resources of the client machine may be overwhelmed when the application is executed.

Specification, Page 2, Line 2 through Page 3, Line 6.

Additionally, with respect to certain embodiments of Applicants' invention, the Specification provides the following:

- The consultation request, according to one embodiment, includes data for consulting Neugent 13. Specification, Page 9, Lines 8-9.
- According to another embodiment, the consultation request includes identification of a source of data for consulting a Neugent 13. Specification, Page 9, Lines 12-14.
- According to another embodiment, the service broker 15 is a remote server. The consultation request from the client 11 to the remote server may include an Extensible Mark-up Language document. Specification, Page 9, Lines 17-20.
- Neugents technologies include assorted methodologies for recognizing patterns in data and for using those patterns to make predictions on new data. New data is analyzed to determine the pattern into which it falls, thereby providing a prediction of future behavior based on the behavior

that has characterized the pattern in the past. Specification, Page 11, Lines 4-10.

- Consult is a process of providing new data to a Neugent (also referred to as data for consulting the Neugent) so that the Neugent uses its model, as developed during training, to provide a prediction from the new data. Specification, Page 14, Lines 17-20.

The Specification also identifies particular advantages that are realized by certain embodiments of Applicants' invention:

> Accordingly, the methodologies described in this disclosure place no burden on the client to maintain a predictive model. The complexity of client/server interfaces may be reduced by simplifying protocols and by hiding issues (for example, making them transparent to the user) of platform technology mismatches.

Specification, Page 15, Lines 2-7. Thus, Applicants' specification asserts at least one practical application of certain embodiments of Applicants' invention and identifies the advancement of the technical arts.[2]

The Examiner states that "Applicant's claims are not in means-plus-function format, so the limitations of the Specification cannot be 'read into' the claims. (Office Action, Page 39) Applicants agree that the claims are not in means-plus-function format and appreciate the Examiner's refusal to read limitations into Applicants' claims. However, Applicants are not requesting that the Examiner read any limitations into Applicants' claims. When the utility of Applicants' claimed invention is called into question, as it appears to Applicants the Examiner has done in this case, Applicants may point out statements in the Specification that support why the claimed invention is believed to be useful. As indicated in the Previous Response, the M.P.E.P. provides:

> The applicant is in the best position to explain why an invention is believed useful. Office personnel should therefore *focus their efforts* on pointing out *statements made in the specification* that identify all practical applications for the invention. Office personnel should rely on such statements throughout the examination when assessing the invention for compliance with all statutory criteria. An applicant may assert more than one practical application, but only one is necessary to satisfy the utility requirement.

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[2] The citations to Applicants' Specification are merely examples intended to illustrate that the Specification discloses at least one practical application of certain embodiments of Applicants' invention. These citations should not be used to limit the scope of Applicants' claims to any particular embodiments.

M.P.E.P. § 2106 (emphasis added). Applicants are not requesting that the Examiner read limitations into Applicants' claims or that Applicants' claims be limited to any particular embodiments. Applicants are merely indicating support in the Specification that the invention recited in Applicants' claims is useful, which the M.P.E.P. appears to encourage.

For at least these reasons, Applicants respectfully submit that independent Claim 1 (and its dependent claims) recite patentable subject matter. For at least certain analogous reasons, Applicants respectfully submit that independent Claims 18-19 and 42 (and their dependent claims) recite patentable subject matter. Thus, Applicants respectfully request that the Examiner withdraw the rejections of these claims under 35 U.S.C. § 101.

As another example, independent Claim 22 recites a "method for providing to a remote client machine a service to train a Neugent, comprising" the following:

- receiving a train request from the remote client machine through a computer network, the train request associated with training data for training the Neugent, the Neugent being distinct from the remote client machine;
- forwarding the train request to the Neugent to invoke training of the Neugent, training of the Neugent comprising causing the Neugent to perform a data analysis of the training data; and
- forwarding to the remote client machine through the computer network a training result object returned by the Neugent, the training result object comprising a data classification mechanism operable to facilitate performance of a predictive analysis by the Neugent.

Thus, "forwarding to the remote client machine through the computer network a training result object returned by the Neugent, the training result object comprising a data classification mechanism operable to facilitate performance of a predictive analysis by the Neugent," is one practical application of independent Claim 22, the useful, concrete, and tangible result being the training result object returned by the Neugent that is forwarded to the remote client machine through the computer network and that comprises a data classification mechanism operable to facilitate performance of a predictive analysis by the Neugent.

Additionally, Applicants respectfully direct the Examiner's attention to at least the following portions of Applicants' Specification: Page 2, Line 2 thought Page 3, Line 6; Page 9, Line 21 through Page 11, Line 10; Page 14, Lines 9-16; and Page 16, Lines 1-14. Applicants' specification asserts at least one practical application of certain embodiments of Applicants' invention and identifies the advancement of the technical arts.[3]

For at least these reasons, Applicants respectfully submit that independent Claim 22 (and its dependent claims) recites patentable subject matter. For at least certain analogous reasons, Applicants respectfully submit that independent Claims 23 and 43 (and their dependent claims) recites patentable subject matter. Thus, Applicants respectfully request that the Examiner withdraw the rejections of these claims under 35 U.S.C. § 101.

II.   The Claims Comply with 35 U.S.C. § 112, First Paragraph

The Examiner rejects Claims 1-19, 22-23, and 26-43 under 35 U.S.C. § 112, first paragraph, because, according to the Examiner, "current case law (and accordingly, the MPEP) require such a rejection if a §101 rejection is given because when Applicant has not in fact disclosed the practical application for the invention, as a matter of law there is no way Applicants could have disclosed how to practice the undisclosed practical application." (Office Action at 7) (emphasis omitted)

As Applicants demonstrated above, independent Claims 1, 18-19, 22-23, and 42-43 and thus their dependent claims, recite useful, concrete, and tangible results and are directed to patentable subject matter under 35 U.S.C. § 101. Since the Examiner based the rejection of these claims under 35 U.S.C. § 112, first paragraph, on the rejections of these claims under 35 U.S.C. § 101, Applicants respectfully submit that the rejections under 35 U.S.C. § 112, first paragraph, must be withdrawn. In any event, Applicants respectfully submit that each of Applicants' claims complies with 35 U.S.C. § 112, first paragraph.

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[3] As discussed above, the citations to Applicants' Specification are merely examples intended to illustrate that the Specification discloses at least one practical application of certain embodiments of Applicants' invention. These citations should not be used to limit the scope of Applicants' claims to any particular embodiments.

For at least these reasons, Applicants respectfully submit that Claims 1-19, and 22-23, and 26-43 comply with 35 U.S.C. § 112, first paragraph. Thus, Applicants respectfully request that the Examiner withdraw the rejection of these claims under 35 U.S.C. § 112, first paragraph.

III.   The Claims are Allowable over the Rejections under 35 U.S.C. § 102(b)

The Examiner rejects Claims 1-6, 8-15, 17-19, 22-23, 26-30, 32-39, and 41-43 under 35 U.S.C. § 102(b) as being anticipated by "Neugents Are on The Loose," The E-Business Adviser, April/May 2000, pp. 1, 8. (the *"Neugents Article"*). Applicants respectfully disagree.

A.   Claims 7, 16, 31, and 40

Applicants assume that if the rejections under 35 U.S.C. §§ 101 and 112 are overcome, dependent Claims 7, 16, 31 and 40 would be allowable if rewritten in independent form because the Examiner did not assert in the Office Action any art rejection against these claims.[4] The Examiner did not comment on this point, which was raised by Applicants in the Previous Response. In light of the Examiner's silence, Applicants continue to make this assumption. Applicants respectfully request that the Examiner confirm the correctness of this assumption.

B.   The Claims are Allowable over the *Neugents Article*

The *Neugents Article* appears to disclose using neugents to replace agents in network management. In particular, the *Neugents Article* discloses performing network management using network agents, which are small programs that reside at network devices, send notifications to a management console, and alert managers of network problems. According to the *Neugents Article*, typical network agents simply notify managers of the network's condition and let the managers make the decisions. The *Neugents Article* then discloses that a new breed of smarter agents called neugents is now available that can learn the normal usage patterns of a network and notify managers proactively. Thus, it is clear from the

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[4] Applicants note that in the first round of prosecution (i.e., prior to the filing of the Request for Continued Examination (RCE)), the Examiner did not assert any art rejections against any of Applicants' claims.

Neugents Article that the neugents disclosed in the article would replace the typical agents at the network devices and communicate notifications to the network manager.

Independent Claim 1, which Applicants discuss as an example, recites:

A data mining system comprising:
a client machine; and
a service broker operable to:
receive a consultation request from the client machine through a computer network, the consultation request associated with data for consulting a Neugent, the Neugent being distinct from the client machine;
forward the consultation request to the Neugent to invoke a consultation of the Neugent, the Neugent operable to perform a predictive analysis with respect to the data for consulting the Neugent that is associated with the consultation request; and
forward to the client machine through the computer network a result object returned by the Neugent, the result object comprising a prediction determined by the Neugent with respect to the data for consulting the Neugent.

The *Neugents Article* fails to disclose, teach, or suggest various limitations recited in Applicants' Claim 1. At a minimum, the *Neugents Article* fails to disclose, teach, or suggest a service broker that is operable to: (1) receive a consultation request from the client machine through a computer network, the consultation request associated with data for consulting a Neugent, the Neugent being distinct from the client machine; (2) forward the consultation request to the Neugent to invoke a consultation of the Neugent, the Neugent operable to perform a predictive analysis with respect to the data for consulting the Neugent that is associated with the consultation request; and (3) forward to the client machine through the computer network a result object returned by the Neugent, the result object comprising a prediction determined by the Neugent with respect to the data for consulting the Neugent, as recited in Claim 1.

Applicants reiterate below the arguments from Applicants' Previous Response, all of which Applicants maintain. Applicants then address the Examiner's response to Applicants' arguments.

For example, the *Neugents Article* fails to disclose, teach, or suggest a service broker that is operable to "receive a consultation request from the client machine through a computer network, the consultation request associated with data for consulting a Neugent, the Neugent being distinct from the client machine," as recited in Claim 1. The Examiner argues that the following statement from the *Neugents Article* discloses these limitations: One technique for handling this type of management is the use of network agents – small programs that reside at network devices, send notifications to a management console and alert managers of network problems. (*See* Office Action, Page 8-9) Applicants respectfully disagree.

First, this statement from the *Neugents Article* describes old agent systems and is unrelated to neugents. Thus, it necessarily fails to disclose, teach, or suggest "receiv[ing] a consultation request from the client machine through a computer network, *the consultation request associated with data for consulting a Neugent, the Neugent being distinct from the client machine*," as recited in Claim 1. Second, the cited portion of the *Neugents Article* clearly does not disclose, teach, or suggest any request from these network agents that is "associated with data for consulting a Neugent." Third, the neugents disclosed in the *Neugents Article* are apparently associated with the network devices and communicate to a centralized network manager. To the extent that these network devices are examples of the client machine recited in Claim 1, the neugents disclosed in the *Neugents Article* are not distinct from the network devices. Thus, the *Neugents Article* fails to disclose, teach, or suggest "the Neugent being distinct from the client machine," as recited in Claim 1.

As another example, the *Neugents Article* fails to disclose, teach, or suggest a service broker that is operable to "forward the consultation request to the Neugent to invoke a consultation of the Neugent, the Neugent operable to perform a predictive analysis with respect to the data for consulting the Neugent that is associated with the consultation request," as recited in Claim 1. The Examiner argues that the following statement from the *Neugents Article* discloses these limitations: Neugents enable companies to warehouse huge, complex data sets, intelligently process information and generate accurate predictions based on that data. (*See* Office Action, Page 9) Applicants respectfully disagree.

First, the cited portion of the *Neugents Article* merely discloses what neugents are. Second, nowhere does this cited portion disclose, teach, or suggest a service broker (*i.e.*, the service broker that received the consultation request from the client machine through the computer network, the consultation request associated with data for consulting a Neugent) that is operable to "forward the consultation request to the Neugent to invoke a consultation of the Neugent, the Neugent operable to perform a predictive analysis with respect to the data for consulting the Neugent that is associated with the consultation request," as recited in Claim 1. There simply is no such service broker described in the *Neugents Article.*

As another example, the *Neugents Article* fails to disclose, teach, or suggest a service broker that is operable to "forward to the client machine through the computer network a result object returned by the Neugent, the result object comprising a prediction determined by the Neugent with respect to the data for consulting the Neugent," as recited in Claim 1. The Examiner argues that the following statement from the *Neugents Article* discloses these limitations: One technique for handling this type of management is the use of network agents – small programs that reside at network devices, send notifications to a management console and alert managers of network problems. (*See* Office Action, Page 9) Applicants respectfully disagree.

First, as discussed above, this statement from the *Neugents Article* describes old agent systems and is unrelated to neugents. Thus, it necessarily fails to disclose, teach, or suggest "forward[ing] to the client machine through the computer network *a result object returned by the Neugent, the result object comprising a prediction determined by the Neugent with respect to the data for consulting the Neugent*," as recited in Claim 1. Second, the neugents disclosed in the *Neugents Article* are apparently associated with the network devices and communicate to a centralized network manager. To the extent that these network devices are examples of the client machine recited in Claim 1, the neugents disclosed in the *Neugents Article* are not distinct from the network devices. The neugents of the *Neugents Article* may perform some processing and then send notifications to the network manager. Thus, the *Neugents Article* fails to disclose, teach, or suggest "forward[ing] *to the client machine through the computer network a result object returned by the Neugent*, the result object

comprising a prediction determined by the Neugent with respect to the data for consulting the Neugent," as recited in Claim 1.

Last, Applicants note that the Examiner's citation is the exact same citation the Examiner argued allegedly discloses a service broker that is operable to "receive a consultation request from the client machine through a computer network, the consultation request associated with data for consulting a Neugent, the Neugent being distinct from the client machine," as recited in Claim 1. Certainly, this cited portion does not disclose, teach, or suggest any service broker that both "receive[s] a consultation request from the client machine through a computer network, the consultation request associated with data for consulting a Neugent, the Neugent being distinct from the client machine" and "forward[s] to the client machine through the computer network a result object returned by the Neugent, the result object comprising a prediction determined by the Neugent with respect to the data for consulting the Neugent," as recited in Claim 1.

Applicants discussed each of the above deficiencies of the *Neugents Article* in the Previous Response. In response to Applicants' arguments from the Previous Response, the Examiner identifies only the following new portion from the *Neugents Article*:

> Big Networks . . . Big Problems
> AGF Brazil – a part of AGF International, an insurance company that conducts business in 34 countries – uses Unicenter TNG to manage its 800 node network throughout Brazil. The network includes Unix servers, desktops running Windows NT and 50 LANs.

(See Office Action, Pages 8 and 41-44 citing the *Neugents Article*, Page 8) The cited portion of the *Neugents Article* discloses that the company AGF Brazil has a network that includes Unix Servers, desktops running Windows NT, and 50 LANs. How this simple disclosure could possible disclose, teach, or suggest the client machine and service broker that are capable of the particular functionality recited in Claim 1 is unclear and is not explained by the Examiner. The disclosure of a network that includes a Unix server and desktops running Windows NT does not disclose, teach, or suggest the particular client machine and service broker recited in Claim 1.

For example, the *Neugents Article* does not disclose, teach, or suggest that the Unix server of AGF Brazil's network (which the Examiner apparently equates with Applicants' service broker) is operable to:

- receive a consultation request from the client machine through a computer network, the consultation request associated with data for consulting a Neugent, the Neugent being distinct from the client machine;
- forward the consultation request to the Neugent to invoke a consultation of the Neugent, the Neugent operable to perform a predictive analysis with respect to the data for consulting the Neugent that is associated with the consultation request; and
- forward to the client machine through the computer network a result object returned by the Neugent, the result object comprising a prediction determined by the Neugent with respect to the data for consulting the Neugent.

Thus, at least because the *Neugents Article* does not disclose, teach, or suggest that the Unix Server is operable to perform the above-discussed limitations recited in Claim 1, the mere disclosure of a Unix server in the *Neugents Article* does not disclose, teach, or suggest the service broker recited in Claim 1.

For at least these reasons, Applicants respectfully request reconsideration and allowance of independent Claims 1 and its dependent claims.

For at least certain analogous reasons, Applicants respectfully request reconsideration and allowance of independent Claims 18-19, 22-23, and 42-43 and their dependent claims. For example, with respect to independent Claims 22-23 and 43, these claims are directed to a "train request" rather than a "consultation request" and are allowable for at least certain analogous reasons to those discussed above with respect to Claim 1.

IV.   The Prosecution of this Application

Applicants respectfully maintain that the Examiner's failure in the Office Action mailed March 9, 2006 (the "Previous Office Action") to respond to Applicants' arguments presented in the Response Accompanying the RCE mailed December 27, 2005 (other than to add references to "training requests" throughout the Examiner's argument) was improper. In

the Final Office Action, the Examiner responded to this assertion by Applicants with the following statements:

> The claims were under RCE and were not under a non-final or final rejection. Further, the core of Applicant's arguments were addressed in the rejection. The rejections made were non-final and Applicant had [the] opportunity to comment about the non-final rejections. In this action, the Examiner makes the rejections final and addresses Applicant's arguments.

(Office Action, Page 37)

Applicants respectfully submit that whether the claims were under RCE, non-final rejection, or final rejection is irrelevant. Applicants filed the RCE in response to a Final Office Action mailed July 27, 2005. The RCE was not simply a cover-sheet submission but instead included a Response Accompanying RCE that included both arguments and amendments in response to the Final Office Action mailed July 27, 2005.

The Code of Federal Regulations states with reference to RCEs that "[i]f an applicant timely files a submission and fee set forth in § 1.17(e), the Office will withdraw the finality of any Office action and *the submission will be entered and considered*." 37 C.F.R. § 1.114(d) (emphasis added). Applicants respectfully submit that considering the submission requires that the Examiner "take note of the applicant's argument and *answer the substance of it*." M.P.E.P. § 707.07 (f) (emphasis added). Applicants respectfully submit that simply repeating arguments verbatim from the previous Final Office Action does not answer the substance of Applicants' arguments presented with the RCE. Applicants should not be forced to wait until the claims are placed under Final Rejection after the RCE to have those arguments and amendments that were submitted with the RCE considered and fully addressed. The substantial fee Applicants paid for an RCE should entitle Applicants to have those arguments and amendments considered and addressed in full in the first office action after RCE.

The Examiner states that "the core of Applicants' arguments were addressed in the rejection." (Office Action, Page 37) Again, simply repeating arguments verbatim from the previous Final Office Action does not answer the substance of Applicants' arguments

presented in the RCE. Applicants respectfully submit that Applicants should have been provided in the Previous Office Action the type of Response the Examiner now presents in the current Final Office Action, which would have given Applicants the opportunity to address the Examiner's responses prior to being under a final rejection after the RCE.

V.   No Waiver

All of Applicants' arguments and amendments are without prejudice or disclaimer. Additionally, Applicants have merely discussed example distinctions from the references cited by the Examiner. Other distinctions may exist, and Applicants reserve the right to discuss these additional distinctions in a later Response or on Appeal, if appropriate. By not responding to additional statements made by the Examiner, Applicants do not acquiesce to the Examiner's additional statements. The example distinctions discussed by Applicants are sufficient to overcome the Examiner's rejections.

Conclusion

Applicants have made an earnest attempt to place this case in condition for allowance. For at least the foregoing reasons, Applicants respectfully request full allowance of all pending claims.

If the Examiner feels that a telephone conference would advance prosecution of this Application in any manner, the Examiner is invited to contact Chad D. Terrell, Attorney for Applicants, at the Examiner's convenience at (214) 953-6813.

Although no fees are believed due at this time, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

BAKER BOTTS L.L.P.
Attorneys for Applicants

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Date: October 23, 2006

CORRESPONDENCE ADDRESS:

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